

Amendments to the Specification:

Please replace the first full paragraph which contains the brief description of the drawings on page 11 which continues on page 12 with the following amended paragraph.

Particular embodiments of the present invention are described below, by way of example only, with reference to the accompanying drawings in which:

Fig. 1 is a diagrammatic representation of apparatus according to a first embodiment of the invention;

Fig. 2 is a diagrammatic representation of apparatus according to a second embodiment of the invention;

Fig. 3 is a diagrammatic representation of the plumbing connections of the apparatus of Fig 2;

Fig. 4 is a diagrammatic representation of the electrical connections of the apparatus of Fig 2;

Fig. 5 is a diagrammatic representation of the electrical trigger events controlling the apparatus of Fig 2;

Fig. 6 is a detailed diagram showing the connections within the terminal block of the apparatus of Fig 2;

Fig. 7 is a diagrammatic representation of apparatus according to a third embodiment of the invention;

Fig. 8 is a diagrammatic representation of apparatus according to a fourth embodiment of the invention;

Fig. 9 is a diagrammatic representation of the detector connections of the apparatus of Fig 8;

Fig. 10 is a flow-chart depicting the control sequence for the autosampler in the apparatus of Fig. 8;

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Fig. 11 is a diagrammatic representation of the relationship between pKa, absorbance and 1st derivative of absorbance for a species having a single ionisable group in which the ionised and unionised forms have different absorbance profiles;

Fig. 12 shows a standards (calibration) curve derived from titration data obtained in accordance with the invention for compounds of known pKa;

Fig. 13 is a plot of pH against time for the linear gradient[[.]];

Fig. 14 is an absorbance curve for 4-CN phenol run on the gradient of Fig. 13;

Fig. 15 is a plot of the first derivative of the absorbance readings plotted in Fig. 14;

Fig. 16 is an absorbance curve for an endpoint titration (Example 4);

Fig. 17 is a calibration curve for an endpoint titration (Example 4);

Fig. 18 is a plot of pH against % acid for the linear gradient on which the standards (calibration) curve of [[fig]] Fig 12 was produced;

Fig. 19 is a calibration curve for an endpoint titration (Example 5);

Fig. 20 is a calibration curve for a complexometric titration (Example 6);

Figs. 21 to 24 show the use of curve fitting as a data processing method;

Fig. 25 is a plot of pKa as determined using the apparatus of Fig. 8 vs. Literature pKa values for 10 compounds;

Fig. 26 is a plot of pKa as determined using the apparatus of Fig. 8 vs. Literature pKa values for a further 10 compounds; [[and]]

Fig. 27 is a plot of pKa as determined using the apparatus of Fig. 8 vs. Literature pKa values for 35 compounds[[.]];

Fig. 28 shows the expected absorbance profiles with the absence and presence of partitioning acid medium; and

Fig. 29 shows the expected absorbance profiles with the absence and presence of partitioning base medium.